Service Ma

Auto-Reverse Stereo Cassette Playsuppl. + SM-RQJ7

03130333 SM-RQJ8

91004988

Mini Cassette 43

Black, Red White, Blue

- The RQ-J8 is a modified version of the RQ-J7 slightly different in design and accessories.
- Please use this manual together with the service manual for model No. RQ-J7 order No. GAD8401330C8-04 and supplementary service manual RQ-J7 order No. GAD84070330S8.



This is	the Service Manual
for the	following areas.

- ·· For all European areas except United Kingdom.
 - ·· For United Kingdom.
- · For Asia, Latin America, Middle East and Africa areas.
- · For Australia.

Area	Color				
ZE	Black, Red, White and Blue				
XL	Black, Red and White				

When servicing model RQ-J8, replace the cabinet, accessories, and packing parts list for mode RQ-J7 with the below parts list.

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
CABINET PARTS		G 11	XQN16 + A35FC	Screw, Bottom Case M'tg (White) ⊕1.6×3.5	G 21 G 22	QHQ1362	Ornament Screw (White)	
G 1 G 1-1	RYMQJ8Z QYT51667	Front Cabinet Ass'y Lock Knob	G 12	XQN16 + A5FR	Screw, Circuit Board M'tg ⊕1.6×5		ACCE	SSORIES
G 1-2	QBC8019	Lock Spring	G 13	XYC2 + CF16	Screw, Circuit Board M'tg			
G 2	QBN8038	Battery Spring			⊕2×1.6	A 1	QFK0203K	Bracket
G 3	RKK292Z1	Battery Cover (Black)	G 14	XQN17 + C3FZ	Screw, Volume Knob M'tg	A 2 [Z][E]	RP9536Z	Headphones
G 3	RKK292Z2	Battery Cover (Red)	-		⊕1.7×3	A 2 [X][L]	RP9545X	Headphones
G 3	RKK292Z8	Battery Cover (White)	G 15	XQN16 + A35FZ	Screw, Main Case M'tg		RWR84614A28	Ear Pad
G 3 [Z][E]	RKK292Z6	Battery Cover (Blue)			⊕1.6×3.5	A 2-1 [X][L]	RWR84615A29	Ear Pad
G 4	RKM906Z1	Bottom Case (Black)	G 16	XTNQ16 + A2F	Screw, Tape Pressur Spring	A 3 [Z][E]	RQX4573Z	Instruction Book
G 4	RKM906Z2	Bottom Case (Red)			M'tg ⊕1.6×2	A 3 [X][L]	RQX4586Z	Instruction Book
			G 20	RYQQJ8Z1	Cassette Lid Assembly	A 4 [X][L]	RJN41Z	Demonstration Tape
G 4	RKM906Z8	Bottom Case (White)	ŀ		(Black)			
G 4 [Z][E]	RKM906Z6	Bottom Case (Blue)	G 20	RYQQJ8Z	Cassette Lid Assembly (Red)		PAC	KINGS
G 5	QGT1668	Volume Knob	G 20	RYQQJ8Z2	Cassette Lid Assembly			
G 6	QJT0039	Lug Terminal			(White)	P 1 [Z][E]	RPK1993Z	Gift Box
G 7	QBP2023	Tape Pressure Spring	G 20 [Z][E]	RYQQJ8Z3	Cassette Lid Assembly (Blue)	P 1 [X][L]	RPK2007ZA	Gift Box
G 8	QQC2092	Spacer	ļ		*	P2	QPA0765	Cushion
G 9 [Z][E]	RGT1139Z	Main Name Plate	G 20 [X][L]	RYQQJ8X1	Cassette Lid (Black)	P3	QPS0707	Rad
G 9 [X][L]	RGT1139X	Main Name Plate	G 20 [X][L]	RYQQJ8X	Cassette Lid (Red)	P4	XZB15X20A01	Polyethylene Cover
G 10	QJB0188	Battery Terminal	G 20 [X][L]	RYQQJ8X2	Cassette Lid (White)	P5 .	QPC0128	Poly Sheet
G 11	XQN16 + A35FZ	Screw, Bottom Case M'tg	G 21	QHQ1362K	Ornament Screw			
		(Black, Red, Blue) ⊕1.6×3.5			(Black, Red, Blue)			

Mational/Panasonic

Matsushita Electric Trading Co., Ltd. P.O. Box 288, Central Osaka Japan

Printed in Japan (H)

Service Manual Service Manual

Auto-Reverse Stereo Cassette Player



Red White Black



This is the Service Manual for the following areas.

- D ... For all European areas except United Kingdom.
- ...For United Kingdom.
- N ... For Asia, Latin America, Middle East and Africa areas.

RQ-J7 MECHANISM SERIES

Specifications

Motor:

Power requirements: DB ...AC; with optional

Panasonic AC Adaptor RP-31

N ... AC; with optional AC adaptor

RP-34

Battery; 3V [two R6 (UM-3) size

batteries]

Electrical governor motor

4.8 cm/s

Tape speed: 4-track 2-channel stereo playback Track system:

with included stereo headphones

Fast forward and

rewind time: Approx. 155 seconds with C-60

cassette tape

DC-in; 3V

Headphones; output level 20mW

(at 16Ω)

Head:

Dimensions:

1 super permalloy head for stereo playback 89mm(W)×112mm(H)×36mm(D)

235g, without batteries

Design and specifications are subject to change without notice.

Jacks:

Mational / Panasonic

Matsushita Electric Trading Co., Ltd.

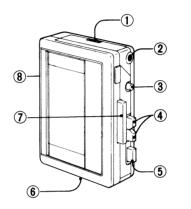
P.O. Box 288, Central Osaka Japan

RQ-J7

CONTENTS

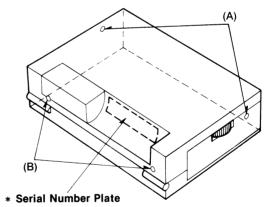
ITEM PAG	GE	ITEM PA	AGE
• Location of Controls and Components	2	Electrical Parts List	. 6
Disassembly Instructions			
Measurements and Adjustments	3	(included Parts List)	. 7
Circuit Boards and Wiring Connection		 Cabinet Parts Location (included Cabinet, 	
Diagram	4	Accessories and Packing Parts List)	. 8
Schematic Diagram	5		

LOCATION OF CONTROLS AND COMPONENTS



- 1 Volume Control
- (2) Headphones Jack
- 3 Direction Button
- (4) Fast Forward/Rewind Button
- (5) Stop Button
- 6 External Power Supply Input Jack
- (7) Play Button
- **8** Battery Compartment

DISASSEMBLY INSTRUCTIONS



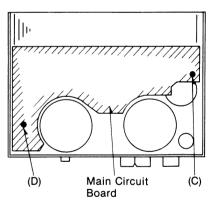
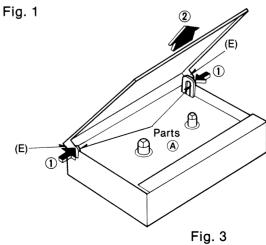


Fig. 2



-2-

Ref. No.	Procedure	Shown in Fig. —.	To remove —. Remove —.		
1	1~2	1	B-44 O	Screw (1.6×3.5)(A)×2	
2	1/02	1	Bottom Case	Screw (1.6×3.5)(B)×2	
3	0- 4	2		Screw (1.6×5) (C)×1	
4 ,	3∼4	Main Circuit E		Screw (2×1.6) (D)×1	
5	:	3		Ornament Screw (E)×2	
6	5∼6	3	Cassette Lid Assembly	Push the parts (A) in the direction of arrow (1), then lift cassette lid assembly in the direction of arrow (2).	

* Serial No. Indication

• The serial number plate of this product is attached to the battery compartment. (Shown in fig. 1)

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. Make sure heads are clean.

- 4. Set volume control to maximum.
- 2. Make sure capstan and pressure roller are clean.
- 3. Judgeable room temperature: 20±5°C (68±9°F)

■ ADJUSTMENT

ITEM	INPUT	MEASUREMENT POINT	SPECIFICATION	ADJUSTMENT POINT	REMARKS
Head azimuth	QZZCFM (8kHz, -20dB)	Headphones jack	Maximum output	Head adjustment screw	
Governor circuit (μ adjustment)	QZZCWAT	Headphones jack	Wow and flutter: Less than 0.5% (RMS)	Short the connection point (B) by soldering.	Before measurement, short the connection point (A) and open the connection point (B) by soldering.
Tape speed	QZZCWAT	Headphones jack	3000± ⁹⁰ Hz	VR2	 (1) Playback the test tape in both forward and reverse directions. (2) Adjust VR2 to obtain counter readings within specified tolerances for both directions.

CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM J2: MAIN HEADPHONES CIRCUIT BOARD NOTES: VR1 BATTERY SPRING BLKBlack BRN.....Brown (3) GRY.....Gray GRNGreen L. BLULight Blue NIL.....No Color Mark ORGOrange RED.....Red SLDShield Wire [BA3404F] VLT.....Violet WHT......White 1 1.35V 9 YEL....Yellow 3 2.47V 11 4 1.35V 12 1.35V 5 0V 13 0V 6 OV 14 1.35V **HEAD FPC** SUS IC2 [BA5206BF] 1 2.87V 9 0V 2 1.57V 10 OV Connection-Point (B) 5 OV 13 2.82V 6 3.0V 14 0.59V Connection 7 1.57V 15 Point (A) 8 2.87V 16 0V [AN6612S] 1 0.06V 5 0V Tape speed 2 1.38V 6 0.69V **PLAYBACK** adjustment VR HEAD 3 0.15V 7 2.37V 4 3.0V 8 1.37V MOTOR [2SA881] 2.37V 1.37 V E 3.0V S3: PLAY **BATTERY** TERMINAL

Components on front of P.B are identified by black symbols.
Components on back of P.B are identified by red symbols.

NOTES:

circuit board (chip side).

For measurement, use VTVM.

of new technology.

Back P.B

on front of P.B

on back of P.B pattern

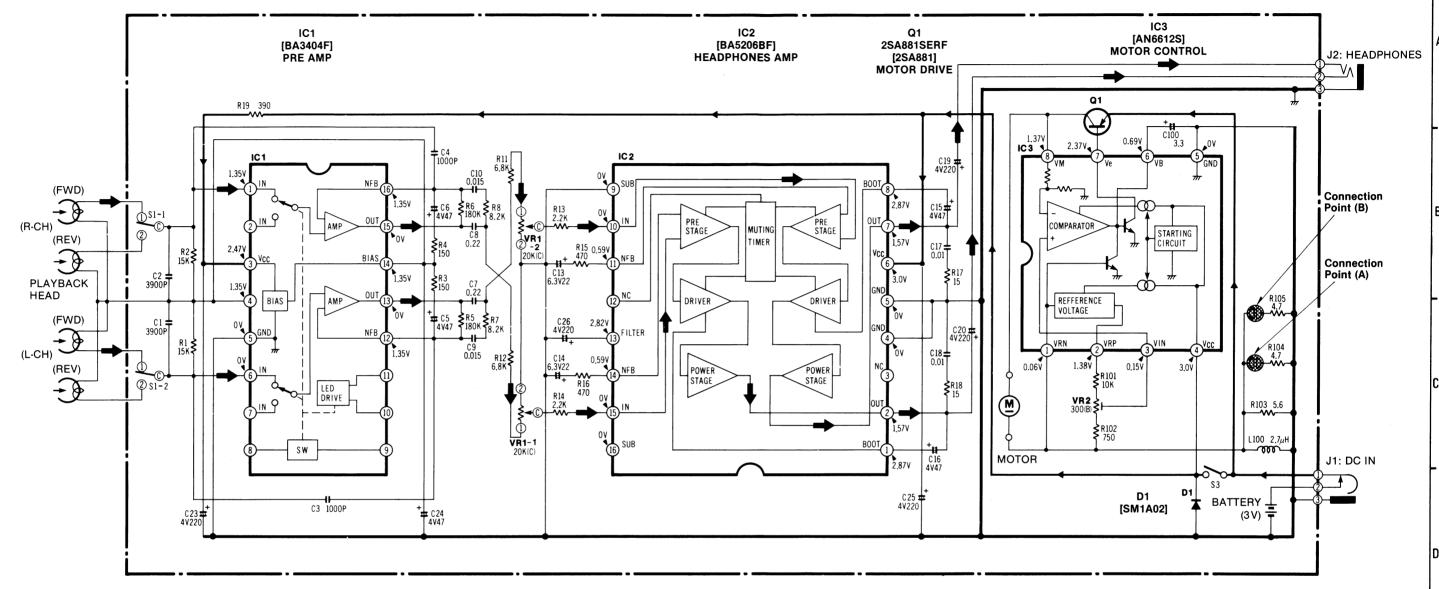
DC IN JACK

• This circuit shown in _____on the conductor indicates printed circuit on the back side of the printed

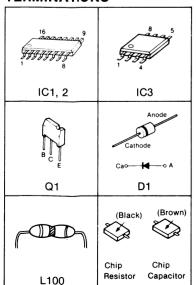
• All voltage values shown in circuitry are under no signal condition and playback mode with volume

• This circuit board diagram may be modified at any time with the development

SCHEMATIC DIAGRAM



TERMINATIONS



NOTES:

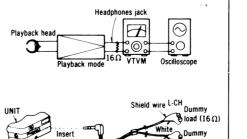
- ...FWD/REV switch (shown in FWD position). • S1-1, S1-2...
- .. Playback ON/OFF switch (shown in OFF position).
- VR1-1, VR1-2Volume controls. VR2 .. Tape speed adjustment VR.
- Connection point (A) and (B)...For governor circuit adjustment.
- Resistance are in ohms (Ω), 1/8 watt unless specified otherwise.
- 1 K = 1,000 (Ω), 1 M = 1,000 K(Ω).
- Capacity are in microfarads (µF) unless specified otherwise.
- P = Pico-farads. All voltage values shown in circuitry are under no signal condition and
- playback mode with volume control at minimum position. For measurement, use VTVM.
- this arrow indicates the flow of the playback signal.

 () () this arrow indicates the flow of the B+ (bias).
- Described in schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes. One type number is used for supply parts number and production parts number which they are identical.
- 2SC2412NRTB, LNSTB ← Production parts number [2SC2412] ---- Supply parts number The supply parts number is described alone in the replacement parts list.
- This schematic diagram may be modified at any time with the development of new technology.

SPECIFICATIONS

Volume control...MAX.

Playback frequency response * Use test tape QZZCFM	125Hz: 0±4dB 315: 0dB 8kHz: -1±4dB
Playback gain * Use tast tape QZZCFM	Greater than 0.6 V
1	



ELECTRICAL PARTS LIST

TES: RESISTORS	CAPACITORS		
ERDCarbon ERGMetal-oxide ERSMetal-oxide EROMetal-film ERXMetal-film	ECBACeramic ECG□Ceramic ECK□Ceramic ECC□Ceramic ECF□Ceramic	ECE□Electrolytic ECE□NNon polar electrolytic ECQSPolystyrene ECS□Tantalum QCSTantalum	CHIP RESISTORS RRDCarboi CHIP CAPACITORS QCUICeram
ERQFuse type metallic ERCSolid	ECQMPolyester film ECQEPolyester film		Ref. No.

ECQFPolypropylene

Ref. No.	Part No.	o. Part Name & Description						
	COIL							
L 100	ELEMT2R7MR	Peaking Coil						
SWITCHES								
S 1	QSS2238	Slide Switch (for FWD/REV)						
S 3	QSB0311	Leaf Switch (for PLAYBACK)						
JACKS								
J 1	QJA0149	DC IN Jack						

EMENT PART	C 20, 23	ECEA0GK221		
Part No.	Ref. No.	Part No.	C 24 C 25	ECEA0GKS470 ECEA0GK221
RESISTORS VARIABLE RESISTORS				ECEA0GKS221 ECSF0JD335
RRD18XJ153 RRD18XJ151	VR 1 VR 2	EVUBAAT50C24 QVNB3A00B32L	TRA	ANSISTOR
RRD18XJ184 RRD18XJ822	CA	PACITORS	Q 1	2SA881
RRD18XJ682			DIODE	& RECTIFIER
RRD18XJ222 RRD18XJ471 RRD18XK150	C 3, 4	QCUT1H392MRL QCUT1H102MRL ECEA0GK470	D 1	SM1A02
RRD18XJ391	C 7, 8	QCUX1E224ZFX	INTEGRA	TED CIRCUITS
RRD18XJ751 RRD18XK5R6	C 9, 10 C 13, 14 C 15, 16 C 17, 18	QCUT1H153MRL ECEA0JKS220 ECEA0GKS470 QCUT1H103MRL	IC 1 IC 2 IC 3	BA3404F BA5206BF AN6612S
	Part No. SISTORS RRD18XJ153 RRD18XJ151 RRD18XJ184 RRD18XJ822 RRD18XJ822 RRD18XJ471 RRD18XK150 RRD18XJ391 ERSB15J103 RRD18XJ751 RRD18XK586	RRD18XJ153 RRD18XJ151 RRD18XJ154 RRD18XJ184 RRD18XJ822 RRD18XJ822 RRD18XJ222 CRD18XJ471 C 3, 4 RD18XK150 CF, 6 RRD18XJ391 C7, 8 ERSB15J103 C9, 10 RRD18XJ751 RRD18XJ751 C 13, 14 RD18XK586	Part No. Ref. No. Part No. SISTORS RRD18XJ153 RRD18XJ151 RRD18XJ184 RRD18XJ822 RRD18XJ822 RRD18XJ222 RRD18XJ222 RRD18XJ471 RRD18XJ471 RRD18XK150 RRD18XJ391 C 5, 6 RCD4C0K470 RRD18XJ391 C 7, 8 QCUX1E224ZFX ERSB15J103 C 9, 10 QCUT1H153MRL RRD18XK5R6 C 9, 10 QCUT1H153MRL RRD18XK5R6 C 13, 14 ECEA0JKS220 RRD18XK5R6 C 15, 16 ECEA0GKS470	C 24 C 25 C 25 C 26 C 25 C 26 C 26

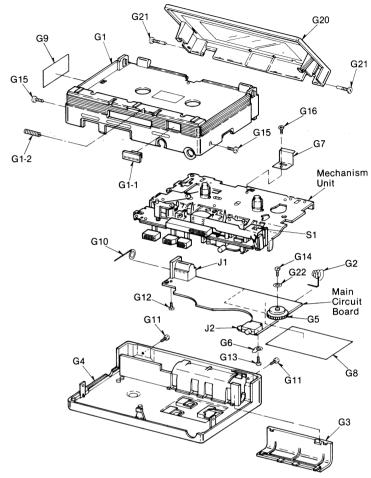
C 20, 23

ECEA0GKS221

MECHANICAL PARTS LOCATION (Rear View) (Front View) APPLY MOLYCOAT (EM20L) This head has \ an FPC board. APPLY SWAFLUID APPLY MOLYCOAT (EM20L)

APPLY MOLYCOAT (EM20L)

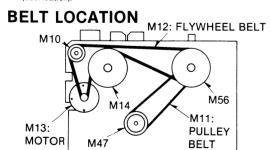
CABINET PARTS LOCATION



NOTES:

 When changing mechanism parts, apply the specified grease to the area marked "xx" shown in the drawing "Mechanical Parts

• [MOLYCOAT (EM20L), SWAFLUID #56]. The grease and/or oil shown in the parentheses function to prevent friction



SPECIFICATIONS

Pressure of pressure roller	165±25 ₂₀ g
Takeup tension * Use cassette torque meterQZZSRKCT	33±10g-cm
Wow and flutter: JIS * Use test tape OZZCWAT	Less than 0.5% (RMS)

REPLACEMENT PARTS LIST

APPLY MOLYCOAT

(EM20L)

APPLY MOLYCOAT M18 (EM20L)

APPLY MOLYCOAT (EM20L)

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
MECHANICAL PARTS			M 31	XUBQ25FT	Stop Ring 2.5¢
			M 32	QBW2126	Snap Washer 2¢
M 1	QMR2153	Lock Rod	M 33	QBW2125	Snap Washer 1.5¢
M 2	QMR2159	Release Rod	M 34	QBW2093	Poly Washer
м 3	QML4112	FWD/REV Assistant Arm	M 35	QBW2102	Poly Washer
M 4	QMF2346	Shield Plate	M 36	QMB1443	Gear Cap
M 5	QDG1340	Auto-Stop Gear	M 37	QXL1721	Playback Arm Assembly
M 6	QDG1341	Power Cam	M 38	QXL1722	Pinch Roller Arm-R
M 7	QDG1344	Conveyance Gear	[Assembly
М 8	QDG1345	Reel Table Gear	M 39	QXL1723	Pinch Roller Arm-L
M 9	QDG1356	Speed Curtailment Gear			Assembly
M 10	QDP1997	Intermediate Pulley	M 40	QXL1724	Fast Forward Arm
			1		Assembly
M 11	QDB0365	Pulley Belt	i		
M 12	QDB0366	Flywheel Belt	M 41	QXR0985	Fast Forward Rod
M 13	MHDN4A3R	Motor			Assembly
M 14	QXF0240	REV Flywheel Assembly	M 42	QXR0986	Rewind Rod Assembly
M 15	QBT2031	Head Return Spring	M 43	QXR0987	Stop Rod Assembly
M 16	QBT2032	FWD/REV Spring	M 44	QXR0988	Changing Rod Assembly
M 17	QBT2033	Playback Arm Spring	M 45	QXR0989	FWD/REV Rod-B
M 18	QBN2058	Fast Forward Return	l	01/2000	Assembly
		Spring	M 46	QXR0990	FWD/REV Rod-A
M 19	QBN2060	Stop Spring			Assembly
M 20	QBN2061	Pinch Roller Spring-R	M 47	QXP0655	Playback Pulley Assembly
			M 48	QXK2894	Lower Base Plate
M 21	QBN2062	Pinch Roller Spring-L	1,4,40	QMK2116	Assembly
M 22	QBN2063	Uper Cam Spring	M 49 M 50	QMZ1316	Head Base Plate
M 23 M 24	QBN2064	Lower Cam Spring	M 50	QMZI316	Head Holder
M 24 M 25	QBN2066 QBN2059	Auto-Stop Release Spring	M 51	QWY4166Y	Playback Hand (with EDC
M 25	QBIN2009	Fast Forward Operation	MISI	QW141001	Playback Head (with FPC Board)
M 26	QBN2065	Spring	M 52	QGO2372M	Playback Button
W 20	QDI42003	Playback Operation Spring	M 53	QHQ1363	Head Adjustment Screw
M 27	XTNQ14C5Q	Spring Tapping Screw ⊕1.4×6	M 54	XTN2 + 4F	Tapping Screw #2×4
M 28	XQN17 + A22	Screw ⊕1.7×2.2	M 55	QBC1496	Head Spring
M 29	XTN2 + 4F	Tapping Screw $\oplus 2 \times 4$	M 56	QXF0247	FWD Flywheel Assembly
M 30	QHQ1339	Step Screw	50	GAN OLTI	r lywilegi Associably
141 00	Q11Q1000		L		

REPLACEMENT PARTS LIST

MOLYCOAT (EM20L)

SWAFLUID #56

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
	04.01	NET DARTO	-		<u> </u>			
CABINET PARTS			G 12		Screw ⊕1.6×5	G 22	XWA2B	Spring Washer
0.4 000440401/		G 13 XTN2+16F Tapping Screw ⊕2×1.6 G 14 XON17+C3FZ Screw ⊕1.7×3 ACCESSORIES			SECODIEC			
G 1	QYM1013K	Main Case Assembly	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			ACCESSORIES		
G 1-1	QGT1667	Lock Knob	G 15		Z Screw ⊕1.6×3.5	l		
G 1-2	QBC8019	Lock Spring	G 16	XTNQ16 + A2F	Tapping Screw ⊕1.6×2	A 1	QFK0203K	Case Holder
G 2	QBN8038	Battery Spring	G 20			A 2 [D][B]	RP9537XP	Stereo Headphones
G 3	QKF2133K	Battery Cover	[D][B]	QYF0706K	Cassette Lid Assembly			Assembly
	"Black Type"		"Black Type"			[For all European areas.]		
	QKF2133R1	Battery Cover		II European area	is.]	[N]	RP9537XN	Stereo Headphones
	"Red Type"		[D][B]	QYF0706R	Cassette Lid Assembly			Assembly
	QKF2133W	Battery Cover	i	"Red Type"		[For A	sia, Latin Amer	ica, Middle East and Africa
	"White Type"		[For a	II European area	as.]	areas.	1	
G 4	QKM1607K	Bottom Case	[D][B]	QYF0706W	Cassette Lid Assembly	A 3 [D][B]	QQT3600	Instruction Book
	"Black Type"		''	"White Type"	•		I European area	as.l
	QKM1607R	Bottom Case	[For a	II European area	is.l		QQT3617	Instruction Book
	"Red Type"			QYF0710K	Cassette Lid Assembly			ica, Middle East and Africa
	QKM1607W	Bottom Case	"	"Black Type"	,	areas.		
	"White Type"		[For Asia, Latin America, Middle East and Africa			A 4 [N] QFTC07L017NZ Demonstration Tape		
			areas.]			[For Asia, Latin America, Middle East and Africa		
G 5	QGT1668	Volume Knob		QYF0710R	Cassette Lid Assembly	areas.		
G 6	QJT0039	Lug Terminal	"	"Red Type"	Caccotto Lia riccomery	4.040.	,	
G 7	QBP2023	Tape Pressure Spring	(For Asia, Latin America, Middle East and Africa			PACKINGS		
G 8	QQC2092	Spacer	areas.]			1		101111111
	QGS3176	Main Name Plate		QYF0710W	Cassette Lid Assembly	P 1 IDIEI	QPN4562	Inner Carton
			וייו	"White Type"	Cassette Liu Assembly			
[For Asia, Latin America, Middle East and Africa areas.]			[For Asia, Latin America, Middle East and Africa			[For all European areas.] [N] QPN4582 Inner Carton		
G 10 QJB0188 Battery Terminal		areas.]						
G 10	GUBUTOO Battery Terminal		areas.j			[For Asia, Latin America, Middle East and Africa areas.]		
G 11	XQN16 + A35FC Screw ⊕1.6 × 3.5		G 21	QHQ1362	Ornament Screw	P 2	QPA0765	Cushion
	"White Type"			"White Type"		P 3	QPS0707	Pad
	XQN16 + A35FZ Screw ⊕1.6 × 3.5		1	QHQ1362K	Ornament Screw	P4	XZB14X20A02	Poly Bag
	"Black and Red Type"		"Black and Red Type"			P 5	QPC0128	Poly Sheet

GAD DRIDW DK BR BW BK NR NW NK